Calendar No. 1127

100TH CONGRESS *2d Session*	SENATE	REPORT 100-593

COMMERCIAL SPACE LAUNCH ACT AMENDMENTS OF 1988

Mr. HOLLINGS, from the Committee on Commerce, Science, and Transportation, submitted the following

REPORT

OF THE

SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ON

H.R. 4399

OCTOBER 7 (legislative day, OCTOBER 6), 1988.—Ordered to be printed

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REPORT

[To accompany H.R. 4399]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (H.R. 4399) to facilitate commercial access to space, and for other purposes, having considered the same, reports favorably thereon with an amendment in the nature of a substitute and recommends that the bill do pass.

PURPOSE OF THE BILL

The purposes of the bill are: to amend the Commercial Space Launch Act; to provide interim transitional support; to ensure the successful development of a competitive domestic expendable launch vehicle (ELV) industry; to apportion launch liability risks between the domestic commercial space launch industry and the U.S. Government; to provide incentives for certain satellites that were removed by a Presidential directive from the space shuttle manifest to launch on domestic ELV's; to establish protections against Government pre-emption of commercial launches on Government ranges; and to recommend the formulation of international "rules of the road" as regards the conduct and pricing of commercial space launch activities.

BACKGROUND AND NEEDS

In May 1983, the President in National Security Decision Directive 94, the "Commercialization of Expendable Launch Vehicles," announced the Government's support for facilitating and encouraging commercial launch activities of ELV's by the private sector. This policy applied to ELV's previously developed for US. Govern-

ment use, as well as to new space launch systems developed specifically for commercial applications, and was consistent with the President's 1982 National Space Policy which designated the space shuttle as the Nation's primary launch system.

To implement these policy decisions, in November 1983, the President designated the Department of Transportation [DOT] as the Federal Government's lead agency for commercial launch activities. This decision was followed by the formal signing in February 1984 of Executive Order 12465 which directed DOT to act as the focal point within the Federal Government for private sector launch contacts. The Executive Order also directed DOT to facilitate the process for commercial launch operators of identifying and satisfying the related requirements and regulations of other Federal agencies concerning commercial space activities.

In October of 1984, the Congress passed, and the President signed into law, the Commercial Space Launch Act, Public Law 99–575, which manifested the Congressional support of the commercial ELV initiative and gave the Congress a direct role in the formulation and implementation of a commercial ELV policy and regulatory regime.

Despite the support from the executive branch and from Congress, the commercial launch services industry was slow to develop. The space shuttle was available for commercial launches, and the space shuttle pricing policy made it very attractive to foreign and domestic customers.

It was not until the summer of 1986 following the space shuttle *Challenger* accident that this industry was provided a policy incentive sufficient to justify investment in and marketing of domestic, commercial ELV's. That policy incentive was National Security Decision Directive 254 which stated that commercial and foreign payloads no longer would be launched by the shuttle. As a result of this decision, and the Department of Defense [DOD] decision to purchase a significant number of ELV's, companies and foreign countries whose satellites could no longer be launched from the shuttle began to consider purchasing commercial launch services from U.S. companies. These satellite companies also purchased launches overseas, primarily from the French company Arianespace, although China and the Soviet Union also were making serious efforts to enter the commercial ELV markets with their governments supporting Long March and Proton launch vehicles, respectively.

At the time of the space shuttle *Challenger* accident, the United States launched 50 percent of the Western hemisphere's communications satellites and Ariane the other 50 percent of the market. It became apparent that there would be more competition in the post-*Challenger* environment and that U.S. firms were being asked to compete with government subsidized launch activities. As a result of these concerns, the United States and the European Space Agency began discussions to formulate "rules of the road" concerning pricing and business practices associated with the commercial ELV industry. However, as of today, these negotiations still have not been resolved, and a clear set of policies and business practices have not been formulated. Most recently, the administration has indicated that such "rules of the road" also must be in place with

the People's Republic of China before the United States would approve export licenses for communications satellites to be launched on the Chinese Long March launch vehicle—the United States still maintains a prohibition on the launch of any such payload on the Soviet Proton launch vehicle.

Implementation of such "rules of the road" is critical to the long-term commercial viability of the U.S. domestic ELV industry because, as noted in the House Report accompanying the Commercial Space Launch Act Amendments of 1988 (H. Rpt. 100-639), foreign governments' support of national launch systems includes a variety of supports including preferential tax treatment, two-tier pricing, providing for below-market interest rates on the financing of vehicle production or launch activities, and charging less than full cost or not at all for insurance. These supports can give foreign launch systems an advantage over U.S. private sector launch companies. It is this issue of foreign competition, coupled with government-sponsored policy changes and existing statutory requirements and international obligations that compels this Committee to address the launch property and liability issues associated with implementation of the Commercial Space Launch Act and establishment of a viable commercial ELV industry. The Committee also is compelled to act on this issue because it was the Federal Government that encouraged U.S. firms to privatize the ELV's or to develop new commercial launch systems. The Government, therefore, must act as a reliable partner and be willing to provide transitional support to this nascent industry until such time as equitable "rules of the road" are in place and the insurance industry has the capacity to accommodate the increased insurance requirements of commercial space activities at reasonable rates.

To assist the Committee in formulating its options, the Committee requested that the Congressional Research Service [CRS] analyze world launch insurance markets. A report was published, entitled "Insurance and the U.S. Commercial Space Launch Industry," and the Committee used this report, as well as informal discussions with the commercial space industry and Government agencies to develop the Committee substitute to H.R. 4399.

Pursuant to Public Law 98-575, the Secretary of DOT, in consultation with the other appropriate agencies, must establish insurance requirements as a condition of the ELV license it issues to the commercial ELV operators. These requirements are intended to protect against risks to Government property and against damages to third parties that might occur from commercial launches. These requirements must be consistent with existing tort law and with the international obligations of the United States including the Convention on International Liability for Damages Caused by Space Objects in Outer Space in which the United States is held strictly responsible for any damage caused by a launch from the United States.

Prior to the policy changes noted above, when ELV services and operations were a Government-sponsored activity, the National Aeronautics and Space Administration [NASA] launched commercial satellites either on the space shuttle or on expendable launch vehicles. The Government required the maximum amount of third party liability insurance available at a reasonable cost from the

owners of the satellites being launched, and it provided full indemnification for losses above these requirements. The Government did not require any first party property insurance since the Government—primarily NASA or the Air Force—was conducting all of the launch operations.

To date, there has never been a successful third-party claim for damages resulting from ELV operations. Damage as a result of a launch mishap or first party damages have occurred. The most recent and severe incident was the April 1986 Titan 34D accident at Vandenberg Air Force Base where the rocket exploded after liftoff and caused $60 million in damages to the pad and an adjoining pad. Since this was a Government launch of a Government payload, there was no first party insurance to cover the damage to the Air Force's launch pad. The cost of rebuilding the pad was paid from appropriated funds.

A major source of uncertainty in the development of a commercial ELV industry has been the cost and availability of property, casualty, and liability insurance for these operations. No insurance market currently exists in the world to protect against the risk posed by commercial ELV launches to Government property because the Government formerly bore these risks. In the past, insurance was obtained only to protect against the loss of the launch vehicle and the payload.

Liability insurance has been available on the world markets, but the cost and aggregate amounts have varied in response to the changing market conditions, particularly the losses experienced in satellite launches and deployment. This point is well documented in the following excerpt from CRS report "Insurance and the U.S. Commercial Space Launch Industry."

> Although 1983 was a successful year for satellite launches, 1984 was not. The underwriters' combined ratio went from 90 percent (meaning a 10 percent profit) at the beginning of 1984 to 180 percent (or an 80 percent loss) by June 1984. During a 1984 shuttle launch, two satellites (Indonesia's Palapa 2-B and Western Union's Westar VI) were not placed into the correct orbits. Although they were later recovered during another shuttle mission and the underwriters reportedly netted about $30 million for the satellites (after recovery costs), they paid out a total of $182 million in claims. In June, a $102 million Intelsat V F-9 was lost during an Atlas-Centaur launch. Insurance premiums for a shuttle launch rose from 5-7 percent in 1983 to 15-20 percent of the value of the satellite in June 1984. Several underwriters, including a major London firm, Orion Insurance Company, dropped out of the space insurance business.
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> In 1985, five more satellites suffered launch failures, costing insurers close to $370 million. The losses included: two Hughes satellites, each insured for $85 million, and two satellites destroyed during an Ariane launch failure, insured for a total of $168 million. A leading U.S. underwriter, International Technology Underwriters (Intec), restricted its coverage and no longer would provide on-orbit

insurance coverage. The amount of insurance available on the world market dropped to $60–70 million. . . .

In January 1986, the space shuttle *Challenger* exploded during launch killing all seven aboard. Although the shuttle was carrying an uninsured satellite (NASA's TDRSS–2), the loss had a strong impact on the launch industry itself. The United States also suffered launch failures of a Titan and a Delta launch vehicle in April and May respectively. Also in May, an Ariane vehicle failed, destroying a satellite insured for $82 million, and Arianespace did not resume launches until September 1987. According to one source, after the shuttle and Ariane failures, "satellite underwriters lost total confidence in satellite launches. . . . " as the combined ratio reached 148 percent. According to Ford Aerospace, the insurance industry's combined ratio for 1977–85 was 200 percent, or, more specifically, the insurers collected $450 million in premiums and paid out $900 million in claims. For 1984–85, the loss ratio was 330 percent. A former insurance executive commented that renewal of on-orbit satellite policies, whose rates had also risen, kept the space insurance industry alive.

In January 1987, *Business Insurance* estimated that launch insurance capacity was $75–100 million per launch. At the end of the year, its estimate was $120–150 million. However, even while insurance coverage became more difficult to find, a former underwriter commented, "In real terms, there is no capacity crisis. What we have here is a crisis of confidence. There is capacity which exists that has not touched the space industry because it (the space industry) is too volatile and unpredictable."

Insurance premiums, which reached a high of 25–30 percent of the value of the satellite, have eased somewhat and are now reportedly at 20–28 percent. Premiums will likely stay high until the insurance companies regain much of their losses. Last year, many underwriters would not write coverage more than 90 days in advance. Currently, the Italian firm Assicurazioni Generali will write a policy 18 months in advance, but maintains the right to review and revise the policy if there is a change in launch vehicle or satellite status. The firm will also grant coverage 12 months in advance, "but the wording says that the client must inform us of a change in the risk."

At least one company, RCA, chose not to insure the launch of its communications satellite (Satcom K–2, in November 1985), rather than pay exorbitant rates, essentially self-insuring the launch. Other companies have bought partial coverage and self-insured the remainder. Some insurance companies are encouraging self-insurance in order to rebuild market confidence. These actions are typical of a "hard" market strategy.

On the other hand, Arianespace requires no launch property insurance and limits liability insurance requirements to a modest

amount: 400 million French francs (approximately $63 million U.S. dollars), with full indemnification provided above that level. Ariane's insurance regime was modeled after the insurance requirements for U.S. launches of communications satellites on the space shuttle.

Since the *Challenger* accident in January 1986, both the People's Republic of China and the Soviet Union have been attempting to enter the world's commercial satellite launch market and have indicated that insurance would be provided by their respective launch organizations. In addition, these foreign launch concerns provide dedicated launch facilities for commercial operations in contrast to the dependence of the U.S. domestic ELV industry on U.S. Government launch facilities.

The bill that has been reported by the Committee is in response to this situation. It is intended to provide a mechanism in which the domestic launch activities can change from a public activity, which it has traditionally been, to a wholly private endeavor. This bill should create an environment where world insurance markets can grow and mature to meet the needs of a domestic launch industry. This bill will provide an adequate risk-sharing arrangement between industry and Government to enable the emerging launch industry to compete on a more equal footing with foreign launch concerns. The domestic launch industry is of sufficient importance to the national economic and military security of this Nation that this legislation is warranted if this industry is to have a credible chance of meeting foreign competition.

Legislative History

On May 13, 1988, Senator Wirth introduced S. 2395, entitled "The Commercial Space Launch Act Amendments of 1988." He was joined in sponsoring the legislation by Senators Bentsen and Danforth.

S. 2395 was introduced as a companion measure to H.R. 4399, which was approved under a suspension of the rules by the House of Representatives on May 24, 1988. The Subcommittee on Science, Technology, and Space held a hearing on May 17, 1988 to receive testimony concerning both the House and Senate legislation. Witnesses included Administration officials and representatives of the ELV industry, satellite manufacturers, and insurance brokers.

On September 20, 1988, in open executive session and without objection, the Committee adopted an amendment in the nature of a substitute to H.R. 4399. The language of the substitute is that of S. 2395 with a number of amendments agreed to by the Committee.

Summary of Major Provisions

As reported, H.R. 4399 would clarify the types and levels of insurance coverage required of the ELV industry as a condition of receiving a license to launch commercial payloads into space. These requirements would be designed to protect against the maximum probable loss that can occur: (1) to Government property, which is used exclusively in commercial ELV operations, and (2) to third parties not involved in the launch but who may be injured as a result of launch operations.

In the case of Government property damage, the Government agrees to waive all claims against the licensees above the required insurance levels. The required insurance levels would be based upon the best estimates of the maximum probable loss for the class of launch vehicle and the type of Government facility used. Initially, that level of coverage would not be allowed to exceed the lesser of $100,000,000 or the maximum level of insurance available at a reasonable cost. Both of these amounts will be adjusted periodically by the Secretary of Transportation (Secretary).

In the case of third party liability claims, the legislation would establish a three-tier system of protection against losses from third party liability claims. The first level of protection would be the mandatory insurance requirements for expendable launch vehicle operators, and would be based upon the best estimate of the maximum probable loss for the class of launch vehicle and other factors. Initially, that requirement could not exceed the lesser or $500,000,000, or the maximum level of insurance available at a reasonable cost. The bill as reported directs the Secretary to review and adjust these amounts periodically.

The second tier would apply to claims above these insurance limits. Payments of these claims would be the responsibility of the Federal Government and these payments would be subject to the availability of appropriations. The Government's risk for any one accident or incident would be limited to a total of $1,500 million in successful claims. This provision would be in effect only to licensees the applications for which are received by the Secretary within 10 years after the date of enactment of this bill. With respect to licensees whose applications are received afterward, launch operators will become fully responsible for all liability claims that might lie against them.

Claims above this level would be the full responsibility of the licensee, with no further Government obligations in this area.

The reported bill also provides incentives for certain satellites to utilize domestic commercial launch services, and makes it less likely that commercial satellites will be pre-empted by government actions except in the cases of imperative national need.

SHORT TITLE AND FINDINGS—SECTIONS 1 AND 2

H.R. 4399, entitled the "Commercial Space Launch Act Amendments of 1988" amends the Commercial Space Launch Act (P.L. 98-575). The bill, as amended, sets forth five findings which form the basis for the legislation. These findings are a recognition by the Committee of the importance of a domestic commercial space launch industry to the competitive position of the United States.

One finding directs the Federal Government to "encourage, facilitate and promote" the U.S. commercial space launch industry. The Committee believes in the importance of promoting the domestic launch industry, but cautions that the primary role of DOT is the regulation of the industry to ensure that operations are fully in compliance with the international obligations of the United States and to protect the public health and safety, safety of property, and national security interests, and that foreign policy obligations of the United States are met in a safe and responsible manner.

DEFINITIONS—SECTION 3

Section 3 of the bill amends Section 4 of the Commercial Space Launch Act and inserts a definition of "third party." In general, third parties are intended to be any person not associated directly with commercial launch operations. However, Government personnel directly associated with the commercial launch operations are still classified as third parties.

Those who are directly associated with launch activities are defined as the United States, its agencies, and contractors or subcontractors involved in launch services; and the entity which holds the license to launch, its customers and contractors, and subcontractors of each of those parties. All persons not excluded in this definition are "third parties."

This definition does not exclude Government personnel from the class of third parties, nor does it exclude contractors or concessionaires whose presence on the Government reservation and in proximity to the launch site is purely incidental and unrelated to the launch itself.

This definition will increase the possibility that comprehensive reciprocal waivers can be reached among all parties associated with the launch of a satellite. Such waivers were a standard element in space shuttle launch agreements.

PRIVATE ACQUISITION OF GOVERNMENT PROPERTY AND SERVICES—SECTION 4

Section 4(a) recognizes that commercial launch property and services are becoming available. The Committee believes that the development of these commercial entities should be encouraged. One means of providing that encouragement is to ensure that Government services and property are provided at prices which do not inhibit the growth of the commercial launch services industry.

The Committee notes that there is no common measurement of "direct costs" that will be borne by the licensee for payment of services provided by the U.S. Air Force or NASA. These two agencies employ two separate standards of cost assessment, which leads to uncertainty and confusion among commercial launch operators. The Committee urges strongly that the U.S. Air Force and NASA take immediate steps to develop and implement a common pricing policy for all launch services provided by the U.S. Government to the commercial expendable launch industry. The Committee believes that there must be sufficient commonality in services provided by these respective agencies to make the creation of such a policy possible.

Section 4(b) provides that the U.S. Air Force, or NASA, may collect directly any payment for activities involved in the production of launch vehicles or payloads. This is intended to permit these agencies to provide quality control or other production-related services and to have payment made directly to the agency providing the services. It is expected that these services will be provided by the Government agencies only with the full agreement of the entity paying for those services.

INSURANCE REQUIREMENTS OF LICENSEE—SECTION 5

Section 5 of this legislation amends section 16 of the Commercial Space Launch Act. This section establishes a statutory mechanism for the determination of property and liability insurance requirements for domestic commercial ELV operations. These requirements must be met as a condition of receiving a license to conduct these operations.

The licensee must obtain insurance or demonstrate financial responsibility to compensate the maximum probable losses that might occur to Government property and to obtain similar protection against claims by third parties. The amount of insurance that will be required to protect against maximum probable loss will be determined by the Secretary, in consultation with the U.S. Air Force, NASA, and other appropriate agencies. It is anticipated that individual determinations will be made on the basis of the launch vehicle size and type, launch trajectory, payload, and other relevant factors. These insurance requirements constitute the amount of protection necessary to protect the interests of United States.

Liability Insurance Requirements

The reported bill amends section 16 of the Commercial Space Launch Act to limit the total amount of liability insurance or demonstrated financial responsibility that will be required as a condition of licensing. To compensate the maximum probable third party liability loss, as determined by the Secretary in consultation with appropriate Federal agencies, the licensees will not be required to obtain financial protection in amounts greater than $500,000,000. An alternative limitation may be imposed if the Secretary determines that the maximum liability insurance available on the world market at a reasonable cost is less than $500 million.

Any insurance policy that is obtained to fulfill the requirements of the license must protect the United States, its agencies, personnel, contractors, and subcontractors, as well as the other parties to the launch. Thus, the United States will receive insurance protection against losses it might incur as a result of commercial launch operations. This is especially important since the United States remains strictly liable for any damages to foreign states or nationals caused by satellite launch operations pursuant to the Convention on International Liability for Damages Caused by Space Objects in Outer Space.

The Committee recognizes that the world insurance markets may be unable to provide coverage to protect fullly against the maximum probable loss. This may occur as a result of constrictions in world liability insurance markets due to the volume of claims being paid or to other factors not related to the space launch business, such as normal business cycles in the insurance industry. The Committee received reports from CRS which stated that losses in the insurance industry totaled more than $450 million in the years between 1977 and 1985. The losses, which resulted from multiple claims, increased premiums to as high as 28 to 30 percent of the value of the satellite being insured and restricted total insurance availability.

The Committee expects that there will be similar occurrences in the commercial space launch business, and that total insurance available for any one launch may be inadequate to meet the requirements of this legislation. For example, a Titan III launch vehicle carrying two communications satellites could easily require $250 million in property insurance for the payloads which must be insured. Add to that $100 million in Government property insurance and up to $500 million in liability insurance, as required by the proposed legislation, and a Titan III launch could require $850 million in insurance that must be obtained to protect against the risks that are posed by one single event—the launch of that vehicle. The aggregate risk may overwhelm the capacity to the marketplace at a particular time, or the ability of a launch operator to pay the premiums that may be charged for this expansive coverage.

Because of the potential for market failure in this segment of the insurance industry, the Committee grants the Secretary the discretion to permit a launch in the absence of insurance coverage to protect against the maximum probable loss. The Committee recognizes a number of factors that would sustain this determination: (1) there has never been a third party claim for damages resulting from launch operations in the United States; (2) commercial launches will be conducted under strict U.S. Air Force controls; (3) the decision to destroy a vehicle will rest in the hands of experienced U.S. Government personnel.

In addition, DOT has completed and will continue to refine a "Hazardous Analysis of Commercial Space Transportation" of these operation which will provide an empirical basis for the insurance requirements. Based on these factors, the actual likelihood of a successful third party claim arising during commercial operations is extremely small.

The Committee received testimony which indicated that liability insurance may be available in amounts up to $500 million. NASA required $500 million in liability insurance for payloads carried by the space shuttle, and a total of $750 million when multiple payloads were launched. Liability insurance is routinely available to the commercial airline industry in amounts of $500 million, and there has never been an incident which resulted in claims exceeding $500 million.

There is no definitive method to measure accurately probable losses resulting from commercial launch operations. Many scenarios can be constructed which lead to potential damages in the billions of dollars. This is an industry with very few launches. The risks, therefore, cannot be spread equitably, and certainly one incident can result in significant losses. Some limitations on the amount of liability insurance required must be established if a domestic commercial industry is to establish itself in the world. No other competing launch organization bears the costs and risks of unlimited liability.

With no precise methodology available to assess risks in expendable launch vehicle operations, a limitation must be established that reflects analogous experience in other industries and practical considerations in the world insurance markets. The Committee believes that $500 million is a reasonable initial limitation on the

total amount of liability insurance that might be required. The Committee expects that the Secretary will increase this figure as the world insurance market grows, since all Government participation ceases when the Government risk-sharing liability provisions of this legislation become inapplicable. The Secretary is directed to review this amount annually and adjust it based upon the availability of liability insurance in the world market. Upon inapplicability of these provisions, the ELV industry will be dependent upon existing insurance capacity in the marketplace. Therefore, it is in the best interests of the industry to work to increase total insurance capacity over the life of this legislation.

The Committee has included the alternative limitation on insurance requirements in recognition of the volatility of the world liability insurance markets. A licensee may not be able to obtain the maximum probable liability coverage as determined by the Secretary.

The Committee expects DOT, in consultation with the appropriate Federal agencies, to exercise caution in granting licenses in circumstances in which the maximum probable loss will not be fully compensated by the protections obtained by the licensees. Any decision to grant a license should be made only after exhaustion of all available insurance sources, including a reasonable amount of self-insurance. Commercial operators are expected to contribute some amount of demonstrated financial responsiblity in addition to the maximum amount of insurance that is obtained before the Secretary will permit the launch to occur. The Committee expects the Secretary to ensure that all available insurance sources, both world markets and self-insurance will be explored prior to a license being granted.

Commercial operators cannot be expected to provide hundreds of millions of dollars in liability self-insurance to gain a license to operate launch vehicles. Nor can domestic commercial operators be expected to pay exorbitant premiums which would eliminate any possible profit from these operations or make their services non-competitive with foreign launch services.

Similarly, the total risk to the Government in these ventures must be limited in scope. Under the provisions of this legislation, the Government is responsible for the payment of claims above the required insurance levels. It is, therefore, necessary to ensure that this risk to the Government is restricted. This is both a protection of the public treasury and a means to foster and enhance the growth of private insurance markets over the life of this legislation.

The Committee is granting ample discretion to the Secretary to respond to the dynamics of the marketplace. The Secretary will exercise this discretion in the full knowledge that all decisions in this regard will be reviewed by the Congress.

Paragraph (4) of section 16(a) of the Act provides that the Secretary, beginning 6 months after the enactment of this legislation, and within each 12-month period thereafter, shall review the limits established in subparagraph (A)(ii) (I) and (II) of paragraph (1). This review will focus upon the availability of insurance, with the intent of adjusting subparagraph (A)(ii) (I) and (II) to reflect more fully world insurance availability. Any adjustment under this provision

will not become effective until the expiration of a 30-day period during which time the Congress can review and comment upon the proposed adjustments.

Property Insurance Requirements

Subparagraph (B) (i) and (ii) of amended section 16(a) of the Commercial Space Launch Act establishes the property insurance requirements and the limitations on those requirements which are a condition of receiving a license to conduct launch operations. The legislation requires a licensee or transferee to obtain insurance or demonstrated financial responsibility in amounts sufficient to compensate the maximum probable loss. The Secretary will make this determination in consultation with the U.S. Air Force and with NASA and other appropriate agencies.

Initially, the licensee will not be required to obtain insurance in amounts greater than (1) $100 million; or (2) the maximum amount of insurance available at reasonable cost, if that is determined to be less than $100 million.

The United States will be the named insured, at no cost to the Government, under the insurance required by this provision. Thus, the United States will receive a form of protection for loss or damage to Government property that never before has been available in launch operations.

The property insurance limitations are consistent with the President's "Space Policy and Commercial Space Initiative to Begin the Next Century," which was announced on February 11, 1988. The Committee notes that DOT has initiated a rulemaking proceeding to effect this policy and the Committee believed it necessary and appropriate to address this issue in legislation.

The maximum probable loss determination should correspond closely to the actual risk to Government property and assets. The facilities that are being utilized by commercial launch operators are critical to the national security of the United States. They should, therefore, be protected as fully as possible to ensure that damage to them, which results from commercial launch operations, is compensated by insurance. The Committee expects that payments for damages will be made promptly following a mishap so that Government property can be repaired and returned to a launch-ready status as quickly as possible.

The initial limitations in the legislation are based upon the best estimates that the Committee received of probable damage to Government property. The largest rocket in the commercial fleet is the Titan III. The worst accident in the history of that vehicle damaged two launch pads and disabled them for 9 months. Losses totaled $60 million including environmental impacts and the cost of clean-up operations. An initial limitation of $100 million is appropriate in light of this and other factors such as the strict control on launch operations that will be maintained by the U.S. Air Force.

The Committee received testimony from the U.S. Air Force that damage to Government property could reach $300 million, despite their best efforts to minimize risk to Government assets. The Committee also received testimony that property insurance to protect Government launch property was not likely to be available in amounts in excess of $120 million because this type of insurance

has never before been required as a condition of launch. The Committee believes that $100 million would protect the Government from the most probable losses that might occur in launch operations, and is an amount that the world insurance markets can provide at reasonable rates.

The Committee believes strongly that it would be contrary to the public interest to permit launches to occur on public ranges unless adequate insurance is available to protect national assets. It may not be possible—due to temporary fluctuations in world property insurance markets—to obtain property insurance in amounts sufficient to meet the maximum probably risk standard. The Committee believes that these circumstances will be rare and in all likelihood the shortfall will be a small percentage of the total required insurance amounts.

In those circumstances, the Committee expects DOT to require from the licensee proof of financial responsibility in an amount sufficient to bridge the difference between the available insurance and the required amount. It the combination of insurance and financial responsibility is still insufficient to meet the maximum probable standard, the Committee believes the Secretary has the discretion to grant a license.

All decisions of this nature, however, must be consistent with the Secretary's statutory mandate to protect the public health and safety and safety of property. This discretion stems from the Secretary's general licensing authority and the authority contained in the legislation of this section to review and adjust the cap on the level of insurance required in light of the availability of insurance at reasonable rates. Any decision in this regard must be made after full consultation with the U.S. Air Force, NASA, and any other agency that is appropriate in this regard.

Paragraph (4) of revised subsection 16(a) provides that the Secretary beginning 6 months after the enactment of this legislation, and within each 12-month period thereafter, shall review the limits established in subparagraph (B)(ii) (I) and (II) of paragraph (1). This review will focus upon the availability of insurance, with the intent of adjusting subparagraph (B)(ii) (I) and (II) to reflect more fully world insurance availability. Any adjustment under this provision will not become effective until the expiration of a 30-day period during which time the Congress can review and comment upon the proposed adjustments.

The Committee stresses that the permission to launch where the insurnace and financial responsibility is less than the maximum probable loss must be fully justified by the prevailing conditions in the world insurance markets; by proof that the operator involved has obtained all of the insurance possible for that particular launch and has offered the maximum amount of financial responsibility within the bounds of sound business practices.

The standards for granting a license, where the maximum probable property loss requirement has not been met, must be more stringent than those relating to the liability requirements. There have been losses at Government launch sites, losses which caused millions of dollars in damage. Unless the maximum probable loss is fully compensated by insurance, the Government will be responsible for the added costs of repair and these funds will have to be

obtained either from existing programs within the U.S. Air Force or from additional apropriations.

The Committee expects DOT to be circumspect about granting licenses in the absence of the statutory property insurance requirements. The legislation requires the DOT to report to the Congress annually regarding all licenses issued and the insurance requirements associated with those licenses. DOT should be on notice that the Committee will be monitoring all actions taken in this area.

Reciprocal Waivers

Subparagraph (C) of revised section 16(a)(1) requires all private entities associated with the launch, i.e. licensees, their contractors, subcontractors, and customers of the licensees, and their contractors and subcontractors, to enter into reciprocal waivers of claims. These waivers shall stipulate that each party is responsible for any property damage or personal injuries that it sustains. The purpose of this provision is: (1) to limit the total universe of claims that might arise as a result of a launch; and (2) to eliminate the necessity for all of these parties to obtain property and casualty insurance to protect against these claims. Such a situation would further strain total insurance that might be available for any one launch. These waivers are a standard element in all launch contracts between NASA and commercial customers.

This provision will maximize the coverage of available insurance resources by avoiding the costs of duplicate litigation between the parties. The waivers executed by the private entities are, therefore, intended to relate only to personal injuries and property damage which are risks normally covered by insurance or self-insurance. The required waivers are not intended to prevent or encumber enforcement of the private entities' contractual rights and obligations.

Subparagraph (D) of revised section 16(a)(1) of the Commercial Space Launch Act requires the Secretary, on behalf of the United States, to enter into reciprocal waivers of claims with the private entities involved in the launch. The terms of these waivers will be similar to those executed by the private entities, and would limit the right of the Government to recover from the licensee or transferee, its contractors or subcontractors, or the contractors and subcontractors of the customers. This provision limits the responsibility of the licensee and other private entities for the cost of repair to Government property. The Government will assume the costs of repair above those limits. The Secretary is not permitted to waive any claims on behalf of Government employees, whose rights will not be affected.

The waiver executed between the Government and the private entities shall apply only to the extent the claims exceed the amount of property insurance or demonstrated financial responsibility required as a condition of license. The Government will receive the proceeds of any insurance policies that are paid following an accident that causes damage to Government property.

Subsection (c) of revised section 16 provides that the head of any Federal agency or department shall collect the insurance proceeds or any other payment owed for the loss or damage to Government property under its jurisdiction or control. This language ensures

that payments will be made directly and without delay to the agency suffering the loss of property in order to expedite the process of repairing these critical assets.

Subparagraph (D) of revised section 16(a)(1) permits the Secretary, in situations where the scope of property insurance coverage available is limited by policy exclusions, to extend the waiver of claims by the Government to those excluded areas.

The Committee has been informed that launch insurance policies generally contain standard exclusions in coverage. When NASA launches commercial payloads, these exclusions are contained in the liability insurance policies required by NASA. They consist of standard exclusions such as: war risk, workers' compensation, radio wave interference, or environmental exposures caused by the space shuttle. The *United States Air Force Model Range Use Agreement* contains mandatory waivers of coverage for exclusions which are "usual" for the type of insurance obtained by the licensees.

In recognition of this practice, the Committee has granted authority to the Secretary to waive claims that extend to areas excluded in the property insurance policies carried by the launch companies. The Committee stresses that this authority is discretionary and expects the Secretary to ensure that the exclusions are in fact "usual" for the type of insurance involved. This provision should not be an inducement for commercial insurers to begin restricting the scope of coverage offered in launch insurance contracts.

Paragraph (3) of revised section 16(a) requires the Secretary to determine the maximum probably loss for purposes of applying the mandatory property and liability insurance requirements of this legislation. This determination must be made within 90 days after an application for a launch license has been received. This provision ensures that the processing of applications is completed in a timely fashion.

It is anticipated that the licensing process will require cooperation between the launch and insurance industries. An efficient and well-defined regulatory process is essential to the success of commercial space launch activities. The hazards and risks analysis already completed by DOT should facilitate compliance with the 90-day requirement.

This paragraph also directs the Secretary to report annually to the relevant committees of the Congress on the current insurance determinations with respect to all issued licenses. The Committee intends to monitor closely all determinations in this regard to ensure that the purposes and intent of this legislation are being met. One such purpose is to ensure that the insurance requirements placed on the commercial launch industry parallel closely the actual projections of maximum probable loss. The Committee, therefore, expects these determinations to be based upon sound methodologies.

As discussed above, paragraph (4) of subsection (a) requires the Secretary to review the property and liability insurance requirements. This review must occur within 6 months of enactment and annually thereafter.

The purpose of this review is to make adjustments to the insurance limitations based upon the availability of insurance on the

world markets. One aspect of this review will be the cost of insurance to commercial operators.

The Committee expects the Secretary to utilize this review provision to assist in the growth and development of private liability insurance markets in anticipation of the expiration of the applicability of the Government risk-sharing liability provisions of this bill.

There is no standard which the Committee can now employ which defines "reasonable cost", since that is largely a subjective judgment. Therefore, the bill provides the Secretary with the discretion to determine reasonable cost. The Committee assumes that this determination will be based upon the inputs of the launch industry, the insurance industry, relevant Government agencies, and other factors. Customary business practices will be a factor in this area, especially with respect to the normal premiums paid for insurance of this type.

There are other factors such as cyclical events in the world markets and incurred losses which could increase premiums temporarily. For example, a launch company may experience a loss resulting in claims which would normally lead to increased premiums for subsequent launch. DOT is expected to consider all of the factors surrounding the level of premiums when making the determination of reasonable cost.

The paragraph requires the Secretary to report the results of these reviews and any proposed adjustments in the required insurance amounts in a timely fashion to the relevant committee of the Congress. No adjustments in the insurance limitations may become effective until 30 days after the submission of that report to the Congress. This review period will enable the committee to examine these determinations. The Committee has a continuing interest in the state of the world insurance markets and the ability of these markets to grow to meet the present and future needs of the commercial launch industry.

Payment of Claims by the Government

Subsection (b)(1) of revised section 16 of the Commercial Space Launch Act requires the payment of claims by the Government, subject to the availability of appropriations. This is the primary risk-sharig provision of this legislation. It is designed to provide a mechanism by which successful claims above the level of insurance or demonstrated financial responsibility, required as a condition of the license, will be paid by the Government. The Government's participation is limited to $1,500 million that may be paid for any one incident. This provision's applicability is limited to licenses applied for within the 10-year period specified in paragraph (5) of section 16(b).

The Secretary is directed to provide for the payment of successful claims, in excess of the required insurance, of a third party which lie against the licensee, transferee, their contractors, or subcontractors or against the customers and contractors and subcontractors of the customer. These claims may include reasonable litigation or settlement expenses and can only be based upon injuries incurred as a result of activities carried out under the license. The Committee intends to exclude all actions in contract. The provisions of this legislation apply only to actions to recover for wrongful death,

bodily injury, or loss of or damage to property resulting from launch activities.

Payments by the Government will be made only to the extent that the total amount of the claims exceeds the amount of liability insurance or demonstrated financial responsibility that is required in the licensing process. The total payments that the Government will provide will not exceed $1,500 million above the insurance required, for any one incident. This figure will be adjusted for inflation occurring after January 1, 1989. The Committee directs the Secretary to employ a common measure of inflation, such as the Consumer Price Index calculated by the Bureau of Labor Statistics, in computing any adjustments in this amount.

The initial successful claims will be satisfied by the insurance that each launch operator is required to maintain. To the extent that claims against the licensee or other parties subject to this legislation exceed the total liability insurance and self-insurance required by the license, the Government will provide the payments to satisfy the claims.

The Government's responsibility in this area ceases once the aggregate of the successful claims in any one incident exceeds the combination of the total insurance and self-insurance required and $1,500 million. At this point, the Government would no longer be responsibile for payment and all further relief will be the responsibility of private entities.

The risk-sharing provisions are critical to addressing the problems raised by the industry. By sharing the risk of catastrophic losses above the required insurance amounts, the Committee believes that the industry will be able to obtain adequate insurance protection for the losses that are most probable. The potential unlimited liability that the commercial launch industry faces from third party claims is a deterrent to the development of a domestic commercial ELV industry. This legislation imposes an interim limit on that liability and establishes a regime in which commercial insurers will be more amenable to providing liability coverage to protect against the maximum probable loss.

The Committee recognizes that the likelihood of any incident that would produce claims in excess of $500 million is very remote. Indeed, as stated previously, there have been no third party claims paid during the entire history of the U.S. space program. This legislation, though this limited risk-sharing mechanism, provides the certainty to the launch operators and their customers that thay will not be exposed to unlimited liability. This legislation should enable the domestic launch industry to compete better with foreign launch operators.

Another provision in paragraph (1) of revised section 16(b) permits the Secretary to provide for the payment of claims without regard to the insurance requirements in situations where the scope of liability insurance coverage available is limited by policy exclusions. This provision is similar to the provision regarding Government property and acknowledges the fact that commercial insurance policies contain certain standard exclusions of coverage. These exclusions fall into areas in which commercial insurance companies are simply unwilling or unable to extend any protection. Without a provision permitting payment by the Government for these

usual exclusions, commercial launch operators would be liable for the full amount of losses in those excluded areas.

This provision is consistent with past practices within NASA. The existence of standard or usual exclusions also is recognized in the *United States Air Force Model Range Use Agreement.*

In recognition of this practice, the Committee has granted authority to the Secretary to pay claims that are based upon areas excluded in the liability insurance policies carried by the launch companies. The Committee stresses that this authority is discretionary and expects the Secretary to ensure that the exclusions are in fact "usual" for the type of insurance involved. This proivion should not be an inducement for commercial insurers to begin restricting the scope of coverage offered in launch insurance contracts.

Conditions of Payment by the Government

Subsection (b)(1) of revised section 16 of the Commercial Space Launch Act prohibits any payments by the Government if the losses result from the willful misconduct of the licensees or transferees or the other parties associated directly with the launch.

The payment of claims by the Government is conditioned upon three factors: (1) notice to the United States of any claim against one of the parties subject to this legislation; (2) participation of assistance by the Government in the defense of any proceedings, if the Government so desires; and (3) approval by the Secretary of that portion of any settlement that is paid from appropriated funds.

The purpose of these conditions is to ensure that the United States is fully aware and involved in litigation or proceedings which my lead to the disposition of claims against licensees. The Committee anticipates that the United States will be a named party in most proceedings that might be filed, so the notice requirement should be met as a matter of course.

The Committee fully expects the United States to participate in all legal proceeding arising from these claims. Participation, however, is not meant to imply control of the defense, since the U.S. interest is not affected directly until the available insurance is exhausted. The Committee does not intend to displace normal commercial practices in the industry with respect to the defense and settlement of claims pursuant to an insurance policy. Any insurance carrier would be expected to defend any claim with assistance from the insured parties and settle in its own authority any claims within the terms and limits of the policy.

This provision is included in the legislation: (1) to make certain that the United States is aware and involved in the proceedings; (2) with a view toward Government collaboration in the defense where appropriate and possible and (3) in recognition of the need to to protect the interests of the Government should the aggregate successful claims or settlements exceed the available insurance limits.

The Committee expects the private entities, both launch companies and their insurers, to welcome the participation and assistance of the United States in these actions, since adjudication of these actions will involve the expertise and knowledge of Federal agencies.

Subparagraph (C) of subsection (b)(2) of revised section 16 requires the Secretary to approve any portion of a legal settlement that is to be paid from appropriated funds of the United States. This will ensure that the interests of the Government are fully protected when it is clear that public funds will be used. Again, the Committee expects that in the event of major incident leading to claims in these amounts, the Government and industry will work closely together in all phases of litigation and settlement. This approval would be required only for that portion of any settlement amount which is paid from public funds, othewise the Committee expects that settlement decisions will be left to the commercial parties.

Paragraph (3) of subsection (b) permits the Secretary to withhold payment of any funds if the Secretary certifies that the amount is not just and reasonable. This would apply to amounts reached through negotiation and settlement. The legislation provides that any claim determined by final judgment of a court of competent jurisdication will be deemed to be just and reasonable.

The Committee expects, however, the Government to participate in any proceeding in good faith. Thus, if an agreement is reached between claimants and the named defendants in which Government funds will be expended, and the Government has fully participated in the negotiations, this provision will not be employed to deny payment that were agreed to by the Government in the negotiations leading to the settlement.

Paragraph (4) of revised section 16(b) establishes procedures for the submission of third party liability compensation plans to the Congress. Such compensation plans would be submitted to the Congress, by the President, on the recommendation of the Secretary, if there is an accident or incident in which the aggregate claims exceed the level of insurance required as a condition of the launch license. Because of the extraordinary nature of such an incident and the potentially widespread consequences, the Committee believes that a system capable of providing for the compensation of just and reasonable claims should be established.

Paragraph (4) is modeled after the compensation plan procedures incorporated in the recently enacted amendments to the Price-Anderson provisions of the Atomic Energy Act of 1954 (P.L. 100-408). It is also modeled after the existing authority that NASA has pursuant to section 308 of the Space Act [42 U.S.C. 2458(b)] except that the Committee substitute provides for expedited consideration of the compensation plan by the Congress.

Subparagraph (A) of this section instructs the Secretary to conduct a survey of the causes and extent of damage of any launch incident or accident if the aggregate claims are likely to exceed the amount of insurance or demonstration of financial responsibility required as a condition of the launch license. In such cases, if any, the Secretary is instructed to report expeditiously to the Congress outlining the findings of the survey.

This survey and its findings should help prepare the involved congressional Committees for transmittal of the compensation plan or plans, if any, pursuant to subparagraph (B) and should ensure the establishment of an equitable, efficient, and workable compensation system.

To date, there has never been a successful third party liability claim paid as the result of an expendable launch vehicle accident or incident in the United States, and such an event is highly improbable. However, should such an accident or incident occur, compensation plan procedures are required.

It is anticipated that legal actions following an accident will be consolidated and that total possible claims will be known shortly thereafter. Thus, it will become apparent early in this process whether the potential amount of the claims will be in excess of the level of financial protection required of the licensees. The United States may be responsible for as much as $1,500 million in aggregate claims for a single accident. If that level is exceeded, then the Government would no longer be responsible for payment, and all further relief will be the responsibility of the private entities.

Subparagraph (B) requires the President to submit a compensation plan or plans to the Congress within 90 days after any determination by a court which indicates the liability for the aggregate of claims may exceed the amount of insurance or demonstration of financial responsibility required under the license. The President's proposed compensation plan would reflect the recommendations of the Secretary who is responsible for the licensing of commercial launch activities and who would have conducted the survey required in subparagraph (A). The Committee also assumes that the other appropriate Federal agencies involved with such disasters or incidents and the legal and budgetary elements of compensation plans also would participate in the formulation of the President's recommendations.

The compensation plan submitted by the President should:

1. outline the aggregate dollar value of such claims;
2. recommend the sources of funding to pay for these claims; and
3. include any legislative language required to implement the compensation plan or plans if legislative authority is required.

Pursuant to revised section 16 (b)(1)(B), the total liability of the U.S. Government for third party liability claims may not exceed $1,500 million. To be consistent with the provision, subparagraph (B) of section 16(b)(4) therefore, indicates that the aggregate value of the compensation plan or plans for any one incident or accident submitted by the President may not exceed $1,500 million. Above that level, the expendable launch vehicle operator, the licensee, would be liable for all claims.

The Committee notes that a situation could occur in which the payment of liability claims by the Federal Government could be accommodated within available appropriations. In such cases, additional legislative action by the Congress may not be required. For example, the unobligated balances of DOT might contain sufficient funds to meet the claims requirements of the compensation plan. Even in these cases, however, the Congress expects to be notified of the proposed payment scheme, since it would affect the current year's budget for one or more programs and agencies.

If a serious accident or incident occurs and the level of claims is substantially above the required level of insurance or self-insurance, the Committee expects the Administration to determine what

additional appropriations and/or legislative authority are required to make these claims payments and to include the necessary legislative provisions in the compensation plan package. This plan, or plans, would then be submitted to the appropriate Committees depending on whether the proposed remedy were an appropriations, a revenue measure, or some other type of compensation. Any funding measure introduced would be consistent with constitutional established procedures.

Pursuant to subparagraph (C) of revised section 16(b)(4), any compensation plan submitted to the Congress must bear an identification number and shall be transmitted to both Houses of Congress on the same day and while each House is in session.

Subparagraph (D) outlines the procedures for consideration of a compensation plan by the Senate. Subparagraph (D)(ii) of revised section 16(b)(4) states that any compensation plan that requires additional appropriations or additional legislative authority must be considered by the Senate pursuant to this subparagraph between the date of transmittal of the plan and the end of the first period of 60 days of continuous session of Congress after the date on which such plan is transmitted to Congress. The Committee assumes that the joint resolution considered under this provision would contain the funding mechanism for the compensation plan. However, there may be situations in which the funding mechanism will not be included in the joint resolution, and the Congress may need to follow a different set of procedures to implement the compensation plan. Such compensation plans are unlikely, and the Congress should be able to adapt to a differing set of circumstances if required.

The approval of the joint resolution by the House, Senate, and the President are required for the implementation of a compensation plan. Consideration of the joint resolution by the Senate within 60 days would ensure the expedited consideration of the compensation plan and would provide greater assurance that the Congress will fully consider the funding mechanisms.

This expedited consideration provision is specifically directed to the Senate because the House rules do not easily accommodate expedited consideration of legislation. Final passage of the joint resolution by both Houses of Congress, therefore, could take longer than 60 days. However, expedited Senate action on this plan and the joint resolution provides an element of certainty in the marketplace that the United States will be a reliable partner with its commercial expendable launch vehicle operators and that liability issue will be dealt with in a timely, predictable, and equitable manner. Furthermore, if there were a launch accident of the magnitude that warrants a compensation plan, the Committee is confident that both Houses of Congress would expedite consideration of any compensation plan.

Subparagraph (D)(iii) of paragraph (4) outlines the format of a joint resolution approving a compensation plan and subparagraph (D) (iv), (v), (vi), (vii) and (viii) describes the expedited procedures that will be in order in the Senate for consideration of a compensation plan.

Pursuant to the language contained in subsection (b)(1) of revised section 16, the proposed payment of claims in any compensation plan are subject to the availability of appropriations.

In addition, no points of order concerning compliance with the Budget Act or the Balanced Budget and Emergency Deficit Control Reaffirmation Act (P.L. 100–119) are waived by any of the provisions of paragraph (4) of revised section 16(b).

For the purposes of paragraph (4), the continuity of session is broken only by an adjournment of Congress sine die and the days on which either House is not in session because of an adjournment of more than 3 days to a day certain are excluded in the computation of the 60 day calendar period.

Termination of Risk-Sharing Provisions

Paragraph (5) of revised section 16(b) imposes a 10-year limitation on the applicability of the liability risk-sharing provisions and the payment mechanism. The provision is designed to apply to all licenses issued or tranferred for which a complete and valid application has been received by the Secretary prior to the date that is 10 years after enactment.

As noted above, two of the primary purposes of this legislation are: (1) to establish a risk-sharing regime to facilitate the transition of the Nation's launch industry from a Government activity to a commercial activity; and (2) to maintain the competitive position of domestic launch services in the world markets. This transition began in earnest in August 1986, when NASA was instructed by the President to terminate most commercial space launch activities. However, despite this policy proclamation, the prevailing conditions of the marketplace are not geared to commercial launch operations. For example, there is presently no commercial launch insurance industry to protect against losses of Government property. Such insurance has never been required, either in the United States, or elsewhere in the world. In addition, the market for launch liability insurance has undergone severe strain in recent years, and there have been significant losses within that industry. Insurance costs, therefore, are extremely high and will remain high until the insurance market recoups its losses. Furthermore, space launch liability insurance has never been required by the United States without some form of limitation and indemnification being provided by the Government.

The Committee believes, therefore, that there will be a period of adjustment necessary to develop and mature the world insurance markets to accommodate the domestic commercial launch industry. Insurance is a fact of commercial life and no operations can be conducted without adequate protection of corporate assets. An active and competitive domestic launch industry is in the public interest, and the Committee is convinced that some risk-sharing for a limited period of time is necessary to sustain the growth of this industry.

The 10-year period of time in the proposed legislation will permit the insurance industry to develop actuarial data on which to base policies and risk. The Committee expects that the experience in the commercial industry will be such that at the conclusion of this period the world liability insurance markets will be sufficiently developed to accommodate the needs of the domestic industry. In addition, it is expected that rules of the road concerning pricing and business practices associated with the commercial expendable

launch vehicle industry will be negotiated with other launching states during this same period to permit competition on a more equitable basis.

The termination provisions incorporate a full marketing cycle for the commercial launch industry and permit them ample time to prepare for the sunset of the Government risk-sharing mechanism. The legislation provides that all applications which are completed prior to the end of the period will be subject to these provisions. Any applications that are completed subsequent to that date and any launches which occur under those licenses will not be subject to the risk-sharing provisions of this legislation.

The Committee expects, however, that the payment mechanism will remain in place to satisfy all claims that may arise from activities pursuant to complete and valid applications. For example, claims based on activities conducted prior to the expiration of the 10-year period may arise following the sunset of the Government risk-sharing mechanism. Likewise, a license may be completed, even approved, prior to the expiration of the 10-year period applicable to the risk-sharing mechanism, but the actual launch may not occur until after the end of the payments provisions.

UNITED STATES LAUNCH INCENTIVES FOR CERTAIN SATELLITES—SECTION 6

Section 6 of the bill provides special incentives to certain satellites affected by the President's August 1986 policy decision which ended NASA's commercial launch role. The President endeavored to foster a market for the commercial expendable launch industry. At the time of the decision, 44 companies held launch service agreements with NASA, under which the space shuttle was committed to meet customer launch requirements. Of these 44, 22 satellites were under construction at the time of the policy decision. Testimony received by the House of Representatives indicated that NASA would honor it outstanding commitments.

Damages to these satellite companies have been significant. As a direct result of the decision, space shuttle customers had no use for space shuttle-unique hardware such as upper stages, software, equipment, and documentation. Required storage of unlaunched satellites has resulted in additional costs to that industry. The House of Representatives also reported that the preliminary cost estimates to obtain alternative launches including additional insurance costs would more than double the anticipated costs of a space shuttle launch. The Committee believes that some recognition must be made by the Government of the impact of this decision on domestic communications satellite companies.

The legislation recognizes this by providing incentives to launch eligible satellites on domestic commercial launch vehicles using Government ranges. The incentives are (1) a waiver of the requirement to purchase property insurance to protect the Government facilities; and (2) a waiver, subject to the availability of appropriations, of charges and costs associated with the provision of launch services by the Government.

These incentives are limited in scope and it is anticipated that they will apply to no more than 12 satellites. The requirement to obtain liability insurance is not affected by these provisions.

Government property insurance was never required in past commercial satellite launches and those costs were never contemplated by the owners of the eligible satellites. In the case where two satellites are launched on one vehicle, and only one satellite is eligible for these incentives, the Committee intends that insurance be obtained in proportion to the percentage of the payload the non-eligible satellite comprises. For example, if the eligible satellite is 40 percent of the total payload and the non-eligible satellite is 60 percent, and the property insurance requirement for that particular vehicle and launch was determined by the Secretary to be $100 million, the launch operator would have to obtain $60 million in protection with the remainder being waived under these provisions.

The second incentive permits eligible satellites and their launch operators to obtain certain Government launch services at no cost. Ordinarily, commercial launch operators would be required to reimburse the Government for direct costs associated with the commercial space launch effort. This waiver provides a further incentive for this very limited class of satellites. Launch service costs that may be waived are listed below. Based on this list, it should be clear that the Committee does not intend to waive the costs of launch vehicles or propellants, or other "launch property" as defined by the Commercial Space Launch Act, to these eligible satellites.

The U.S. Air Force and NASA have indicated that the cost and type of Government support that would be provided free of charge in these circumstances includes:

(a) Operations and Maintenance: Includes facilities engineering support; vehicle and equipment support; launch complex support, power system support; and roads and ground support.

(b) Range Support Costs: Includes logistics, ordinance support; radar support; communications support; tracking support; documentation; fire services; range safety; work control (administration); security services; and meteorological services.

In addition, the Committee does not intend to substitute U.S. hardware and services for those otherwise provided by or commercially available to the commercial launch provider. However, the Government will waive those charges for Government-provided launch services.

Estimates provided by NASA and the Air Force reflect varying costs which depend on the specific type of vehicle utilized. Testimony received by the Committee indicates that the total cost of these provisions will be no more than $15 million. The Congressional Budget Office estimate of the total impact of this provision in the House-passed bill, H.R. 4399, was $10 million over 2 years, assuming that eight satellites were launched with these incentives.

The Committee has identified as many as 12 satellites which may be eligible for these incentives. Many of the satellites that were eliminated from the space shuttle manifest have found launches with foreign competitors, or plans for their deployment have been modified.

The legislation restricts eligibility to those satellites which were under construction August 15, 1986, and subject to a launch services agreement with NASA which as of August 15, 1986, was in effect but not yet carried out. Finally, in order to quality for these incentives, the satellite must be launched on a vehicle licensed under provisions of the Commercial Space Launch Act. This is to ensure that the launches of these eligible satellites occur in the United States on domestic launch vehicles.

The Committee believes that this issue is a matter of good faith reliance by the satellite industry on the validity of launch agreements they held with the Government at the time of the Challenger disaster. The incentives provided in this section are reasonable and are intended to encourage owners of eligible satellites to use domestic launch vehicles. It is anticipated that the existence of these incentives will enable domestic launch providers to successfully obtain contracts with the owners of eligible satellites and to avoid further loss of opportunity to foreign competitors.

PREEMPTION OF SCHEDULED LAUNCHES—SECTION 7

Section 7 of this legislation establishes strict guidelines for the preemption of commercial launches to ensure that this will occur in only cases of imperative national need. Presumption occurs when the Government, after agreeing in writing to specific launch periods, cancels a commercial launch. The Committee recognizes that launch schedules may slip due to delays either in a commercial program or a Government program. Such a slip in a launch schedule does not, in the Committee's view, constitute a preemption.

Testimony before the Committee established that reliability of access and predictability of schedule with respect to Government launch ranges are equally important to cost in overall considerations of launch vehicle selection. Unless U.S. commercial access to Government launch ranges can be assured of such reliability and predictability, foreign competitors may employ this uncertainty to gain a competitive advantage. Ariane, the principal competitor to the U.S. industry, maintains a dedicated commercial launch facility, while our operators must share the ranges with Government agencies, until such time as commercial launch facilities are built in this country.

The Committee expects that the Air Force and NASA will employ good faith efforts to schedule their needs to accommodate the commercial launch providers. The Committee does not intend that Government requirements will be dependent upon commercial operations. It is anticipated that the Government agencies will work in coordination with commercial operators to maximize the use of the launch facilities to everyone's benefit. The Committee recognizes, however, that cases of imperative national need may arise, such as a requirement to place a critical asset in orbit, and the legislation allows for this eventuality.

The Committee cannot at this time anticipate all of the instances which may involve the imperative national need. Rather it is expected that any decision to preempt a commercial launch will be under the most exigent of circumstances. A further safeguard for

the industry in this regard is the requirement that the decision to preempt be made personally by the Secretary of the Air Force or the Administrator of NASA, in consultation with the Secretary, and cannot be delegated.

It is the intent of the Committee that a commercial launch provider whose scheduled launch is preempted by the United States shall not be required to pay the United States twice for the provision of launch services. In the event of a preempted launch, the Government must determine what launch services had been provided up to the point of the preemption which will have to be provided again to conduct the rescheduled launch. No charge shall lie against the commercial operators for such duplicate services and the licensee shall be required to pay only those charges which are in addition to those already assessed and paid for by the licensee.

Any decision to preempt a commercial launch shall be reported to the Congress within 7 days after the determination is made. This report shall affirm the need and explain the circumstances which justify the preemption. This report must also include a schedule for ensuring the prompt launching of the affected payload.

STUDY OF PROCESS FOR SCHEDULING LAUNCHING—SECTION 8

Section 8 of the legislation directs the Secretary of Transportation, in cooperation with the Secretary of Defense and the Administrator of NASA to study ways and means of scheduling Government and commercial launches in the most efficient manner possible. This study shall be conducted in consultation with representatives of the space launch and satellite industries. The purpose of the study is to develop a schedule (1) which makes the best practicable use of the launch property of the United States and (2) which assures that the launch property of the United States that is available for commercial use will be available on a commercially reasonable basis.

The Committee believes that this study is necessary to ensure that the needs of the commercial expendable launch industry are accommodated within the national security requirements of the Nation. This accommodation will be necessary until a dedicated commercial launch facility can be constructed in the United States.

COMMERCIAL SPACE LAUNCH COMPETITION—SECTION 9

Section 9 of this legislation expresses the sense of the Congress that the United States should explore ways and means of developing a dialogue with foreign governments to develop guidelines for access to launch services by satellite builders and users. The purpose of this dialogue is to ensure the conduct of reasonable and fair international competition in commercial space activities.

The Committee believes that the domestic expendable launch vehicle industry faces serious competition from other launching states. Ariane maintains a 50 percent market share on all communications satellite launches, and other foreign launch systems are soliciting commercial payloads. Most recently, the People's Republic of China has been granted conditional approval to launch a U.S.-made communications satellite. (This approval is under review by the Congress. If the Congress does not disapprove, it will be for-

warded to the Coordinating Committee [COCOM] for approval.) One condition of this approval is the completion of "rules of the road" negotiations with the Chinese government concerning launch services pricing and business practices before an export license is granted for the communications satellite. Completion of such negotiations with all launching nations is critical to the long-term commercial success of the domestic expendable launch vehicle industry.

The statement of the Sense of the Congress included in H.R. 4399 is an indication that these negotiations should proceed without delay and that they are necessary for the development of a commercial launch industry.

LAUNCH VEHICLE RESEARCH AND DEVELOPMENT—SECTION 10

Section 10 directs the Administrator of NASA, in consultation with representatives of the space launch and satellite industries, to design a program of research into new launch technologies. NASA traditionally has been involved in research and development activities in both aeronautics and aerospace. Efforts in this regard have been conducted in close cooperation with the commercial industry, and much of the success that this Nation has realized in aviation and aerospace is the result of these cooperative efforts. The Committee believes that a continuing research and development program in launch vehicle technologies will be beneficial to Government and commercial operators and is essential to maintain a competitivenes of the domestic launch industry.

The Committee anticipates that this program will result in the development of new launch technologies and systems. In addition, the competitive atmosphere that will exist among domestic launch firms and throughout the world launch markets will serve to induce commercial operators to engage in research and development efforts in all aspects of launch operations.

During the executive session of the Committee to consider these amendments, the Committee expressed a concern that all technological advancements in these areas be shared fully with appropriate Federal agencies. The Committee directs the Administrator of NASA, in designing this program of cooperation with commercial launch operators, to take steps to ensure that U.S. agencies, such as the U.S. Air Force, be given access to all developments in this regard.

The Committee expects that the domestic commercial launch industry will cooperate with the Administrator in assuring that their advances in launch technologies will be shared with Government agencies.

APPLICABILITY TO LICENSES—SECTION 11

Section 11 of the bill provides that the amendments made by this legislation shall apply to all licenses issued under the Commercial Space Launch Act before, on or after the date of enactment of this legislation.

COMMERCIAL LAUNCH FACILITIES

A newly constructed commercial space launch facility is being considered by the State of Hawaii, which has committed State funds for a feasibility study and an Environmental Impact Statement for commercial launch facilities to be built on the island of Hawaii. The Committee is aware of these efforts and has discussed the potential for newly constructed commercial space launch facilities and their associated needs with officials of NASA and the U.S. Department of Transportation. It is the intention of the Committee to address the issues associated with the construction of the new commercial space launch facilities during the next session of Congress and to continue to work with NASA, the Department of Transportation, and State government concerning these matters.

ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office.

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, September 29, 1988.

Hon. ERNEST F. HOLLINGS,
Chairman, Committee on Commerce, Science, and Transportation, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has reviewed H.R. 4399, the Commercial Space Launch Act Amendments of 1988, as ordered reported by the Senate Committee on Commerce, Science, and Transportation, September 20, 1988.

Estimated Cost to the Federal Government. Based on information provided by the Air Force, the National Aeronautics and Space Administration (NASA), and the Department of Transportation (DOT), CBO estimates that enacting H.R. 4399 would result in additional costs to the federal government of roughly $10 million over the next two years. These costs stem from provisions authorizing the Air Force to waive certain charges for providing launch services, and would be subject to future appropriations actions. The estimate does not include the potential budget impact of any claims paid by the federal government from appropriated funds as part of the risk-sharing agreement specified by the bill.

H.R. 4399 would create a special class of eligible satellites—those scheduled to be launched on the space shuttle and under construction when NASA terminated all contracts for launching commercial payloads. Under this bill, the Air Force would be authorized to waive all charges for direct costs—as defined in the bill—if these satellites are launched from government ranges, provided funds to cover these costs are provided in appropriations bills. Normally, for launches of commercial payloads, the government charges the launch provider for the direct costs of providing launch services. These costs depend on the type of launch vehicle used, and range between $1 million and $3 million per launch, according to the Air Force and NASA.

Based on information provided by DOT, it appears that 22 satellites would be eligible for the direct cost waiver. Not all of the satellites would be launched from government ranges, however. Some might never be launched and others would use foreign launch ranges. Assuming eight of these satellites would be launched from government ranges and that the necessary funds are provided through appropriations bills, we expect that the increased federal costs would be roughly $10 million over the next two years.

Additionally, H.R. 4399 would establish a risk-sharing agreement between launch providers and the federal government for third party claims resulting from commercial launches from government facilities. Through the risk-sharing agreement, the federal government would partially indemnify the launch providers for third party claims that exceed the amount covered by liability insurance, although the payment of any successful claims would be subject to further Congressional action. Under current law, launch providers are required to purchase liability insurance covering third party claims and are responsible for claims above the level of insurance. The Secretary of Transportation specifies the level of coverage required when issuing a license to the launch provider.

H.R. 4399 would require the launch providers to purchase private liability insurance covering up to $500 million in damages for third party claims. If a third party claim exceeds the amount covered by insurance, the President would be required to prepare a compensation plan for the claimants; the bill would establish special procedures providing for Congressional approval of the compensation plan and for the appropriation of the necessary funds. The maximum amount payable for any single claim would be $1.5 billion.

CBO has no basis on which to estimate whether this arrangement would affect the federal budget. To date, there have been no successful third party claims resulting from launches from government facilities. The overall effect of this arrangement is clarify the federal government's liability, and does not necessarily increase or decrease that liability, because it is possible that the government could be found liable under current law.

The bill would also require the launch provider to purchase insurance of up to $100 million for damage to government property. Damage above the level covered by insurance would be borne by the federal government. We do not expect that this requirement would have a major effect on the government's liability, because DOT currently requires launch providers to purchase insurance. If purchased, $100 million of coverage would probably cover a great deal of damage to government property. For example, when a Titan rocket exploded on the launch pad in 1986, the damage to government property was around $40 million, according to DOT.

H.R. 4399 would also require two studies on commercial launch issues, one by the Department of Transportation and one by NASA. CBO expects that completing these studies would cost under $500,000.

Previous CBO Estimate. On May 3, 1988, CBO prepared a cost estimate for H.R. 4399, as ordered reported by the House Committee on Science, Space, and Technology, April 21, 1988. The differences between this estimate and the earlier one reflect the differences between the two versions of the bill.

Estimated Cost to State and Local Governments. CBO expects that enacting this bill would not affect the budget of any state or local government.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Michael Sieverts.

Sincerely,

JAMES L. BLUM,
Acting Director.

REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported.

The bill amends the Commercial Space Launch Act by imposing statutory insurance requirements on the commercial space launch industry and by establishing a Government risk-sharing mechanism to assist in the payment of certain claims that might arise as a result of commercial space launch operations. A regulatory agency and structure is already in place, in the form of the Office of Commercial Space Transportation in DOT, and the commercial space launch industry always has had a general statutory requirement to obtain insurance.

With respect to the risk-sharing mechanism, it is expected that any additional personnel or regulatory requirements can be accommodated within the current operations of the Office of Commercial Space Transportation.

The Committee believes that this legislation will not subject individuals or businesses to any additional regulation or paperwork requirements. Further, this bill will have no impact on the privacy of individuals.

SECTION-BY-SECTION ANALYSIS

SECTION 1

The short title of the bill is the "Commercial Space Launch Act Amendments of 1988."

SECTION 2

This section establishes as findings: (1) that the commercial space launch industry is essential to assure access to space for Government and commercial users; (2) that the Federal Government should encourage, facilitate, and promote the use of a domestic commercial space launch industry; (3) that the U.S. commercial space launch industry must be competitive internationally; (4) that Federal Government policies should recognize the responsibility of the United States under international treaty obligations; and (5) the United States must maintain a competitive edge in international commercial space transportation by continuing research and development of launch vehicles and technology.

SECTION 3

This section limits the definition of "first parties" in the Commercial Space Launch Act to only the U.S. Government, its agen-

cies, or its contractors or subcontractors involved in launch services; the licensee or transferee; the customers of the licensee or transferee; and the contractors and subcontractors of each of those entities. All persons not subject to this limitation would be classified as "third parties."

SECTION 4

This section makes three amendments to section 15 of the Commercial Space Launch Act. First, it amends section 15(a), directing the Secretary to consider the availability of commercial services when making Government services and facilities available to launch operators.

Second, this section amends section 15(b)(1) by adding a definition of "direct costs, for purposes of that section.

Third, this section adds a provision at the end of section 15 which permits the head of any Federal agency to collect payments directly from owners or manufacturers of launch vehicles or payloads if that agency peforms services at the request of the owner or manufacturer.

SECTION 5

This section, which revises section 16 of the Commercial Space Launch Act, establishes basic insurance requirements as a condition of receiving a license to launch commercial payloads. This insurance must protect against the "maximum probable loss" as determined by the Secretary for the class and size of the launch vehicle. The insurance must protect against losses to Government property and against liability claims by third parties who are not associated directly with the launch.

Limits on Insurance: The insurance is initially limited to $100 million in the case of Government property coverage, and $500 million for liability insurance. In both cases, an alternative limit is imposed if the maximum level of insurance available on the world market at a reasonable cost is less than those fixed dollar amounts.

Waiver of Claims: The Secretary will waive all claims above the property insurance required as a condition of licensing. Thus, all damage to Government property that occurs above this amount will be borne by the United States.

The licensees, their customers, and the contractors and subcontractors of those parties will be required to waive all claims against each other as a condition of licensing. Thus, each party will be responsible for all damages occurring to their property.

Redetermination of insurance requirements: The Secretary is required to determine the maximum probable loss for each license that is requested under the Commercial Space Launch Act. This determination has to be made within 90 days, and reports on these determinations must be submitted annually to the Congress.

The Secretary shall make periodic redeterminations of the maximum amount of insurance available at reasonable cost and the dollar limits on the required insurance. These determinations must be made annually and submitted to the Congress for review prior to becoming effective.

Payment of Claims: Subject to the availability of appropriations, the Secretary is required to make payments for all successful third party claims above the insurance and self-insurance required as a condition of license. If the payments will require additional appropriated funds, the Congress must approve both a compensation plan submitted by the Secretary of Transportation and new funds for this purpose. If the damages above the insured levels do not require additional funds, the Congress must be notified, and payments will be made from other sources within the Executive Branch.

Limitation on Payments/Sunset: In no case may the total amount of Federal funds paid for any one incident exceed $1,500 million, and the applicability of this entire provision will terminate for licensees whose applications are not received within the specified 10-year period.

The Secretary is expected to participate in any settlement relating to these claims and retains the right to withhold payment if the amounts are not "just and reasonable." The provision regarding the withholding of payments provision applies only to settlements since a final judgment and determination of award by a court of competent jurisdiction is "just and reasonable."

SECTION 6

This section provides certain eligible satellites with incentives to use domestic expendable launch vehicles. These incentives waive charges for use of certain Government services and a waiver of the Government property insurance requirements. Eligible satellites are defined as those which were under construction on August 15, 1986; were subject to a launch services agreement with NASA on that date that was not yet carried out; and are licensed for launch under the Commercial Space Launch Act.

SECTION 7

This section establishes conditions under which the U.S. Government may preempt the launch of a commercial satellite. Any decision to preempt a commercial launch must be made personally by the Secretary of the Air Force or the Administrator of NASA and can only be done in cases of imperative national need. An explanation of the circumstances for a preemption and a proposed rescheduling must be presented to the Congress within 7 days after the decision to preempt.

SECTION 8

This section directs the Secretary, in consultation with other appropriate Federal agencies, to study ways of scheduling commercial and Government launches in the most efficient manner to maximize use and availability of Government property for commercial users.

SECTION 9

This section expresses the sense of the Congress that the United States should seek a dialogue with other launching states to assure

the conduct of fair and reasonable competition in commercial space activities.

SECTION 10

This section directs the Administrator of NASA to design a program for the support of research into new launch systems technologies. The goal of this program is the development of higher performance and lower cost launch vehicles.

SECTION 11

This section indicates that the amendments made by this bill shall apply to all licenses issued under the Commercial Space Launch Act before, on, or after the date of enactment.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new material is printed in italic, existing law in which no change is proposed is shown in roman).

COMMERCIAL SPACE LAUNCH ACT

Section 4 of that Act

DEFINITIONS

SEC. 4. For purposes of this Act—

(1) through (9) * * *

(10) "State", and "United States" when used in a geographical sense, mean the several States, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the United States Virgin Islands, Guam, and any other commonwealth, territory, or possession of the United States; [and]

(11) "third party" means any person or entity other than—

(A) the United States, its agencies, or its contractors or subcontractors involved in launch services;

(B) the licensee or transferee;

(C) the licensee's or transferee's contractors, subcontractors, or customers involved in launch services; or

(D) any such customer's contractors or subcontractors involved in launch services; and

[(11)] *(12)* "United States citizen" means—

(A) any individual who is a citizen of the United States;

(B) any corporation, partnership, joint venture, association, or other entity organized or existing under the laws of the United States or any State; and

(C) any corporation, partnership, joint venture, association, or other entity which is organized or exists under the laws of a foreign nation, if the controlling interest (as defined by the Secretary in regulations) in such entity is held by an individual or entity described in subparagraph (A) or (B).

Section 15 of that Act

USE OF GOVERNMENT PROPERTY

SEC. 15. (a) The Secretary shall take such actions as may be necessary to facilitate and encourage the acquisition (by lease, sale, transaction in lieu of sale, or otherwise) by the private sector of launch property of the United States which is excess or is otherwise not needed for public use and of launch services, including utilities, of the United States which are otherwise not needed for public use. *In taking such actions, the Secretary shall consider the commercial availability, on reasonable terms and conditions, of substantially equivalent launch property or launch services from a domestic source.*

(b)(1) The amount to be paid to the United States by any person who acquires launch property or launch services, including utilities, shall be established by the agency providing the property or service, in consultation with the Secretary. In the case of acquisition of launch property by sale or transaction in lieu of sale, the amount of such payment shall be the fair market value. In the case of any other type of acquisition of launch property, the amount of such payment shall be an amount equal to the direct costs (including any specific wear and tear and damage to the property) incurred by the United States as a result of the acquisition of such launch property. In the case of any acquisition of launch services, including utilities, the amount of such payment shall be an amount equal to the direct costs (including salaries of United States civilian and contractor personnel) incurred by the United States as a result of the acquisition of such launch services. *For purposes of this paragraph, the term "direct costs" means the actual costs that can be unambiguously associated with a commercial launch effort, and would not be borne by the United States Government in the absence of a commercial launch effort.*

(2) through (3) * * *

(4)(A) The Secretary, with the cooperation of the Secretary of Defense and the Administrator of the National Aeronautics and Space Administration, shall take steps to ensure that the launches of payloads with respect to which a launch date commitment from the United States has been obtained for a launch licensed under this Act are not preempted from access to United States launch sites or launch property, except in cases of imperative national need. Any determination of imperative national need shall be made by the Secretary of the Air Force or the Administrator of the National Aeronautics and Space Administration, in consultation with the Secretary, and shall not be delegated. A licensee or transferee preempted from access to a launch site or launch property shall not be required to pay to the United States any amount for launch services solely attributable to the scheduled launch prevented by such preemption.

(B) The Secretary of the Air Force or the Administrator of the National Aeronautics and Space Administration, in cooperation with the Secretary, as the case may be, shall report to the Congress within 7 days after any determination of imperative national need under subparagraph (A), including an explanation of the circumstances justifying such determination and a schedule for ensuring the prompt launching of a preempted payload.

[(c) The Secretary may establish requirements for liability insurance, hold harmless agreements, proof of financial responsibility, and such other assurances as may be needed to protect the United States and its agencies and personnel from liability, loss or injury as a result of a launch or operation of a launch site involving Government facilities or personnel.]

(c) Consistent with the requirements of this Act, the Secretary shall establish requirements for proof of financial responsibility and such other assurances as may be necessary to protect the United States and its agencies and personnel from liability, death, bodily injury, or loss of or damge to property as a result of a launch or operation of a launch site involving Government facilities or personnel. The Secretary may not under this subsection relieve the United States of liability for death, bodily injury, or loss of or damage to property resulting from the willfull misconduct of the Untied States or its agents.

(d) The head of any Federal agency or department may collect payment for activities involved in the production of a launch vehicle or its payload for launch if such activities were agreed to by the owners or manufacturers of such launch vehicle or payload.

Section 16 of that Act

[LIABILITY INSURANCE

[SEC. 16. Each person who launches a launch vehicle or operates a launch site under a license issued or transferred under this Act shall have in effect liability insurance at least in such amount as is considered by the Secretary to be necessary for such launch or operation, considering the international obligations of the United States. The Secretary shall prescribe such amount after consultation with the Attorney General and other appropriate agencies.]

LIABILITY INSURANCE

SEC. 16. (a)(1)(A) Each license issued or transferred under this Act shall require the licensee or transferee—

(i) to obtain liability insurance; or

(ii) to demonstrate financial responsibility,

in an amount sufficient to compensate the maximum probable loss (as determined by the Secretary, after consultation with the Administrator of the National Aeronautics and Space Administration, the Secretary of the Air Force, and the heads of other appropriate agencies) from claims by a third party for death, bodily injury, or loss of or damage to property resulting from activities carried out under the license in connection with any particular launch. In no event shall a licensee or transferee be required to obtain insurance or demonstrate financial responsibility under this suparagraph, with respect to the aggregate of such claims arising out of any particular launch, in an amount which exceeds (I) $500,000,000 or (II) the maximum liability isnurance available on the world market as a reasonable cost, if such insurance is less than the amount in subclause (I).

(B) Each license issued or transferred under this Act shall require the licensee or transferee—

(i) to obtain insurance; or

(ii) to demonstrate financial responsibility, in an amount sufficient to compensate the maximum probable loss (as determined by the Secretary, after consultation with the Administration of the National Aeronautics and Space Administration, the Secretary of the Air Force, and heads of other appropriate agencies) from claims against any person by the United States for loss of or damage to property of the United States resulting from activities carried out under the license in connection with any particular launch. In no event shall a licensee or transferee be required to obtain insurance or demonstrate financial responsibility under this subparagraph, with respect to the aggregate of such claims arising out of any particular launch, in an amount which exceeds (I) $100,000,000 or (II) the maximum insurance available on the world market at a reasonable cost, if such insurance is less than the amount in subclause (I).

(C) Each license issued or transferred under this Act shall require the licensee or transferee to enter into reciprocal waivers of claims with its contractors, subcontractors, and customers, and the contractors and subcontractors of such customers, involved in launch services, under which each party to each such waiver agrees to be responsible for any property damage or loss it sustains or for any personal injury to, death of, or property damage or loss sustained by its own employees resulting from activities carried out under this license.

(D) The Secretary, on behalf of the United States, its agencies involved in launch services, and contractors and Subcontractors involved in launch services, shall enter into reciprocal waivers of claims with the licensee or transferee, its contractors, subcontractors, and customers, and the contractors and subcontractors of such customers, involved in launch services, under which each party to each such waiver agrees to be responsible for any property damage or loss it sustains or for any personal injury to, death of, or property damage or loss sustained by its own employees resulting from activities carried out under the license. Any such waiver shall apply only to the extent that claims exceed the amount of insurance or demonstration of financial responsibility required under subparagraph (B). After consultation with the Administrator of the National Aeronautics and Space Administration and the Secretary of the Air Force, the Secretary may also waive, on behalf of the United States and any Federal agency, the right to recover any damages for loss of or damage to property of the United States to the extent insurance is not available by reason of policy exclusions which are determined by the Secretary to be usual for the type of insurance involved.

(2) Any insurance policy obtained, or demonstration of financial responsibility made, pursuant to a requirement described in paragraph (1) shall protect the United States, its agencies, personnel, contractors, and subcontractors, and all contractors, subcontractors, and customers of the licensee or transferee, and all contractors and subcontractors of such customers, involved in providing the launch services, to the extent of their potential liabilities, at no cost to the United States.

(3) The Secretary shall determine the maximum probable loss under paragraph (1) (A) and (B) associated with activities under a license, within 90 days after a licensee or transferee has requested

such a determination and has submitted all information the Secretary requires to make such a determination. The Secretary shall amend such determination as warranted by new information. Within 12 months after the date of enactment of the Commercial Space Launch Act Amendments of 1988, and within each 12-month period thereafter, the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report on the current determinations with respect to all issued licenses and the reasons for those determinations.

(4) Within 6 months after the date of enactment of the Commercial Space Launch Act Amendments of 1988, and within each 12-month period thereafter, the Secretary shall review the amounts specified in paragraph (1)(A)(i) and (B)(I), and shall submit a report to the Congress which, if appropriate, contains a proposed adjustment to such amounts to conform with altered liability expectations and availability of insurance on the world market. Such proposed adjustment shall take effect 30 days after the submission of such report.

(b)(1) To the extent provided in advance in appropriations Acts or to the extent there is enacted additional legislative authority to provide for the payment of claims as submitted in the compensation plan outlined in paragraph (4), the Secretary shall provide for the payment by the United States of successful claims (including reasonable expenses of litigation or settlement) of a third party against the licensee or transferee, or its contractors, subcontractors, or customers, or to the contractors or subcontractors of such customers, resulting from activities carried out pursuant to a license issued or transferred under this Act for death, bodily injury, or loss of or damage to property resulting from activities carried out under the license, but only to the extent that the aggregate of such successful claims arising out of any particular launch—

(A) is in excess of the amount of insurance or demonstration of financial responsibility required under subsection (a)(1)(A); and

(B) is not in excess of the level that is $1,500,000,000 (plus any additional sums necessary to reflect inflation occurring after January 1, 1989) above such amount.

The Secretary shall not provide for payment of any part of such claim for which the death, bodily injury, or loss of or damage to property has resulted from willful misconduct by the licensee or transferee. To the extent insurance required pursuant to subsection (a)(1)(A) is not available to cover any such successful third party liability claim by reason of insurance policy exclusions determined by the Secretary to be usual for the type of insurance involved, the Secretary may provide for the payment of such excluded claims without regard to the limitation expressed in subparagraph (A).

(2) The payment of claims under paragraph (1) shall be subject to—

(A) notice to the United States of any claim, or suit associated with such claim, against a party described in paragraph (1) for death, bodily injury, or loss or damage to property;

(B) participation or assistance in the defense by the United States, at its election, of that claim or suit; and

(C) approval by the Secretary of that portion of any settlement which is to be paid out of appropriated funds of the United States.

(3) The Secretary may withhold payment under paragraph (1) if the Secretary certifies that the amount is not just and reasonable, except that the amount of any claim determined by the final judgment of a court of competent jurisdiction shall be deemed by the Secretary to be just and reasonable.

(4)(A) If as a result of activities carried out under a license issued or transferred under this Act the aggregate of the claims arising out of a particular launch are likely to exceed the amount of insurance or demonstration of financial responsibility required under the license, the Secretary shall (i) make a survey of the causes and extent of damage and (ii) expeditiously submit to the Congress a report setting forth the results of such survey.

(B) Not later than 90 days after any determination by a court indicating that the liability for the aggregate of claims arising out of a particular launch under such a license may exceed the amount of insurance or demonstration of financial responsibility required under the license, the President, on the recommendation of the Secretary, shall submit to the Congress a compensation plan or plans that (i) outlines the aggregate dollar value of such claims; (ii) recommends sources of funding to pay for these claims; and (iii) includes any legislative language required to implement the compensation plan or plans if additional legislative authority is required. No compensation plan for a single event or incident may exceed the aggregate of $1,500,000,000.

(C) Any compensation plan transmitted to the Congress pursuant to subparagraph (B) shall bear an identification number and shall not be transmitted to both Houses of Congress on the same day and to each House while it is in session.

(D)(i) The provisions of this subparagraph shall apply with respect to consideration in the Senate of any such compensation plan and to Senate action on such compensation plan.

(ii) Any such compensation plan that requires additional appropriations or additional legislative authority must be considered by the Senate pursuant to this subparagraph within 60 calendar days of continuous session of Congress after the date on which such plan is transmitted to the Congress.

(iii) For the purposes of this subparagraph, the term "resolution" means only a joint resolution of Congress the matter after the resolving clause of which is as follows: "That of ———— approves the compensation plan numbered ———— submitted to the Congress on ————, 19—.", the first blank space therein being filled with the name of the resolving House and the other blank spaces being appropriately filled; but does not include a resolution which includes more than one compensation plan.

(iv) A resolution once introduced with respect to a compensation plan shall immediately be referred to a committee (and all resolutions with respect to the same compensation plan shall be referred to the same committee) by the President of the Senate.

(v)(I) If the committee of the Senate to which a resolution with respect to a compensation plan has been referred has not reported it at the end of 20 calendar days after its referral, it shall be in order

to move either to discharge the committee from further consideration of such resolution or to discharge the committee from further consideration with respect to such compensation plan which has been referred to the committee.

(II) A motion to discharge may be made only by an individual favoring the resolution, shall be highly privileged (except that it may not be made after the committee has reported a resolution with respect to the same compensation plan), and debate thereon shall be limited to not more than one hour, to be divided equally between those favoring and those opposing the resolution. An amendment to the motion shall not be in order, and it shall not be in order to move to reconsider the vote by which the motion was agreed to or disagreed to.

(III) If the motion to discharge is agreed to or disagreed to, the motion may not be renewed, nor may another motion to discharge the committee be made with respect to any other resolution with respect to the same compensation plan.

(vi)(I) When the committee has reported, or has been discharged from further consideration of, a resolution, it shall be at any time thereafter in order (even though a previous motion to the same effect has been disagreed to) to move to proceed to the consideration of the resolution. The motion shall be highly privileged and shall not be debatable. An amendment to the motion shall not be in order, and it shall not be in order to move to reconsider the vote by which the motion was agreed to or disagreed to.

(II) Debate on the resolution referred to in subclause (I) of this clause shall be limited to not more than 10 hours, which shall be divided equally between those favoring and those opposing such resolution. A motion further to limit debate shall not be debatable. An amendment to, or motion to recommit, the resolution shall not be in order, and it shall not be in order to move to reconsider the vote by which such resolution was agreed to or disagreed to.

(vii)(I) Motions to postpone, made with respect to the discharge from committee, or the consideration of a resolution or motions to proceed to the consideration of other business, shall be decided without debate.

(II) Appeals from the decision of the Chair relating to the application of the rules of the Senate to the procedures relating to a resolution shall be decided without debate.

(5) The provisions of paragraphs (1) through (4) shall apply only to each license issued or transferred under this Act for which a complete and valid application has been received by the Secretary prior to the date that is 10 years following the date of enactment of the Commercial Space Launch Act Amendmetns of 1988.

(c) The head of any Federal agency or department shall collect insurance proceeds or any other payment owed for the loss of or damage to Government property under its jurisdiction or control resulting from activities carried out under a license issued or transferred under this Act. Such proceeds or other payment shall be credited to the current applicable appropriations, funds, or accounts of that agency or department.

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